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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Edelberg, Jay
	Group Art Unit	Unknown
		Mallari, Patricia
]	Examiner Name	Widian, 1 amen
	Attorney Docket No: 1	676.001US2
Sheet 1 of 4		

		US PA	ATENT DOCUMENT	Class	Subclass	Filing Date
Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Supciaso	If Appropriate
(11110		2011011000	Giaever, I., et al.	435	291	08/08/1991
(V)	US-5,187,096	02/16/1993		600	109	09/19/1994
1	US-5,993,378	11/30/1999	Lemelson, J. H.	435	7.1	11/25/1997
	US-6,117,643	09/12/2000	Simpson, M. L., et al.	600	372	08/17/1998
	US-6,171,239	01/09/2001	Humphrey, D. R.	435	287.1	12/02/1999
10	US-6,455,303	09/24/2002	Orwar, O., et al.	435	201.1	12021.000

		FOREIGN PATENT	DOCUMENTS.			
Examiner	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T ²
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R		AIRD, W., et al., "Vascular Bed-specific Expression of an Endotnellal Cell Gelle Is Programmed by the Tissue Microenvironment,", The Journal of Cell Biology	
1		138(5), (1997),1117-1124 ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, J. L., et al., "A Software Sensor Using Neural Networks for ANDERSON, A Software Sensor Using Neural Networks for ANDERSON (Neural Networks Neural Neu	
		ANDERSON, J. L., et al., "A Soliward Vol. 21, (1998 (Part II)),2204-2298 Detection of Patient Workload", Pace Vol. 21, (1998 (Part II)),2204-2298 ANGLADE, F., et al., "A study of the action of clonidine on secretion from	
	<u> </u>	adrenal medulla in dogs", Br. J. Pharmac. 91, (1967),461-460 ANVERSA, P., et al., "Morphometric Analysis of Coronary Capillaries during physiologic myocardial growth and induced cardiac hypertrophy", A Review, Int.	
		J. Microcirc: Clin Exp 8, (1989),353-363 BOUSSE, LUC, "Whole cell biosensors", Sensors and Actuators B 34, (1996),270-275	
		BOUTE, W., et al., "Introduction of an Automatic Q1 Interval Driver Nato	
		BRIGNOLE, M., et al., "Pacing for Carotid Sinus Syndrome and Sick Sinus	L
		CELIKER, A., et al., "Comparison of Normal Sinus Silvania and Fashing Flate and Children with Minute Ventilation Single Chamber Rate Adaptive Permanent	
_		CHRISTINI, D., "Direct biologically based biosensing of dynamic physiologically based biosensing of dynamic physiolegical based Circ Physiol. 280, (2001),pp. H2006-H2010	
		CHRISTINI, D. J., et al., "Practical Real-Time Computing System to Biomedical Experiment Interface", Annals of Biomedical Engineering, Vol. 27, (1999),180-	
		CLEMENTY, J., et al., "Clinical Significance of Multiple Sensor Options: Rate Response Optimization, Sensor Blending, and Trending", <u>The American Journal of Cardiology</u> , Vol. 83(5B), (1999),166D-171D	

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	considered, whether or applicant i Applican		Substitute Disclosure Statement Form (PTO-1449) as with MPEP 809, Draw line through citation in not conformance and not considered, include copy of this form with next communication to number (optional) a Applicant is to place a check mark here if English tanguage Translation is attached

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INFORMATION DISCLOSURE	' Application Number	Unknown
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	Group Art Unit	Unknown
	Examiner Name	Mallari, Patricia
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		R DOCUMENTS NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the leter	T²
Examiner Initials*	Cite No 1	(book, magazine, journal, serial, symposium, catalysts, etc.), data, perget,	
		OF ENERTY I et al. "Dual Chamber Rate Responsive Pacing System Driven	
a l		by Contractility, Final Assessment After 1-Year Follow-up*, Pace Vol. 21, (1998)	
0		1 (0 - 4 1)\\ 0400 2407	
		CONNELLY D. T. et al. "Initial Experience with a New Single Chamber, Dual	
		Connect Data Dacagnerive Pacemaker" Pace, Vol. 10, (1993), 1033-1041	
		LOOOK C 1 of all "Peal-Time Measurements of Corticosterious in Coriscious	
		Animals Using an Antibody-Based Electrode", Nature Biotechnology, Vol. 15,	
		1 (4007) 407 474	
		(1997),467-471 CORNELL, B. A., et al., "A Biosensor that Uses Ion-Channel Switches", Nature.	
	ļ	Val 207 (4007) 590-583	
		DEN HELIED P. et al. "Improved Rate Responsive Algorithm in Q1 Driven	
		Pacemakers - Evaluation of Initial Response to Exercise", Pace Vol. 12.	
		(4000) 905 911	_
		EDELBERG I M. et al. "Enhancement of Murine Cardiac Chronotropy by the	
		Molecular Transfer of the Human B2 Adrenergic Receptor cDNA", J. Clin.	
Ì		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	 -	FRITZ, J., et al., "Translating Biomolecular Recognition into Nanomechanics",	
		Caiaman Mai 200 (2000) 316-318	_
	 	FULL MED D. L. et al. "Transplantation of Cardioac Tissue into the Mouse Ear.,	
		I be a serious of Apotomy, Raylor University College of Medicine, 273-201	┞-
	 	GRECO, E. M., et al., "How to Program Rate Responsive Pacemakers", Pace	
		1 Val. 22 (2000) 165-173	1_
		LAU C. P. et al., "Pacemaker Mediated Tachycardias In Single Chamber Rate	ł
		December Decipe Page Vol. 13 (1990 (Part I)) 15/5-15/9	
	·	LIALL C. P. et al. "Pacemaker Mediated Tachycardias In Single Chamber Rate	1
		Pesponsive Pacing* Pace Vol. 13. (1990 (Part I)),1575-1579	-
	+	TIFUNG & K of al "An Integrated Dual Sensor System Automatically	1
		Optimized by Target Rate Histogram", Pace Vol. 21, (1998), 1009-1000	╁-
- 	1	LELING S K et al "An Integrated Dual Sensor System Automatically	
İ		Optimized by Target Rate Histogram" Pace Vol. 21, (1996), 1999-1900	+
	 	LUO, L., et al., "Ion Channel Sensor", Analytical Letters 32(7), (1999),1271-	
		4000	+-
	1	LUO, L., et al., "Ion Channel Sensor", Analytical Letters 32(7), (1999),1271-	
		1286	+
	1	MAKINO S., et al., "Cardiomyocytes Can Be Generated From Marrow Stromal	
		Colle In Vitro" Clin Invest 103(#5) (1999).697-705	+-
1	 	MAKINO S et al. "Cardiomyocytes Can Be Generated From Marrow Stromal	
ľ		L Calla In Vitro" L clin Invest Vol. 103 No. 5, (1999),697-709	-
		MALESEV V A et al "Embryonic Stem Cells Differentiate in Vitro Into	Ì
I		Cardiomyocytes Representing Sinusnodal, Atrial and Ventricular Cell Types,	
		Mechanisms of Development 44, (1993),41-50	ᆚ

	Cells In Vitro", J. clin. Invest., Vo	cytes Can Be Generated From Marro 1. 103, No. 5, (1999),697-705 nic Stem Cells Differentiate In Vitro inusnodal, Atrial and Ventricular Cel	Into
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7 7	Substitute Disclosure State whether or not citation is in conformance with MPEP 609. Draw line if whether or not citation is in conformance with MPEP 609. Draw line if whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in conformance with MPEP 609. Draw line whether or not citation is in citation in citation is in citation in citation in citation in citation in citation in citation in citatio	ment Form (PTO-1449)	of this form with next communication to

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	First Named Inventor	Edelberg, Jay		
	Group Art Unit	Unknown		
	Examiner Name	Mallari, Patricia		
Sheet 3 of 4	Attorney Docket No:	1676.001US2		

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e		MALTSEV, V. A., et al., "Embryonic Stem Cells Differentiate In Vitro Into Cardiomyocytes Representing Sinusnodal, Atrial and Ventricular Cell Types", Mechanisms of Development 44, (1993),41-50	
- \		MARSHALL, A., et al., "DNA Chips: An Array of Possibilities", Nature	
		Biotechnology, Vol. 16, (1998),27-31	
		MOURA, P. J., et al., "Chronotropic Response of an Activity Detecting Pacemaker Compared with the Normal Sinus Node", Pace Vol. 10, (1987 (Part I)),78-86	
		MULCHANDANI, P., et al., "Biosensor for Direct Determination of Organophosphate Nerve Agents 1. Potentiometric Enzyme Electrode",	
		Biosensors & Bioelectronis 14, (1999), 77-85 NAESSENS M et al "Whole-Cell Biosensor for Direct Determination of	
	_	Solvent Vanours" Rinsensors & Bioelectronics, Vol. 13, No. 3-4, (1990),341-340	-
		OGAWA, H., et al., "Heart Rate Responses to Autonomic Drugs in Sick Sinus Syndrome - Correlation with Syncope and Electrophysiologic Data", <u>Japanese Circulation Journal</u> , Vol. 55, (1991),15-23	
		OWICKI, J.C., et al., "Biosensors Based on the Energy Metabolism of Living Dells: The Physical Chemistry and Cell Biology of Extracellular Acidification",	
		Riosensors & Rioelectronics 7, (1992),255-272	-
		PANCRAZIO, J. J., et al., "Development and Application of Cell-Based Biosensors", Annals of Biomedical Engineering, Vol. 27, (1999),697-711	
		RENDELL, M. S., et al., "The Relationship of Laser - Doppler Skin Blood Flow Measurements to the Cutaneous Microvascular Anatomy", Microvascular	
		Research 55, (1998),3-13 RIVARD, A., et al., "Age-Dependent Impairment of Angiogenesis", Circulartion	
	-	99(1), (1999),111-120 RODRIGUEZ, R. D., et al., "Update on Sick Sinus Syndrome, a Cardiac Disorder of Aging", Geriatrics, Vol. 45, No. 1, (1990),26-36	
		ROWE-TAITT, C. A., et al., "Array Biosensor for Detection of Biohazards",	
	·	STROBEL, J. S., et al., "Programming of Sensor Driven Pacemakers", MD	
		SUGIURA, T., et al., "A Self-Tuning Effect of Membership Functions in a Fuzzy-Logic-Based Cardiac Pacing System", <u>Journal of Medical Engineering & Technology</u> , Vol. 22, No. 3, (1998),137-143	
-	-	SUTTON, R., et al., "The Natural History of Sick Sinus syndrome", Pace Vol. 9,	
		UPDIKE, S. J., et al., "A subcutaneous Glucose Sensor With Improved Longevity, Dynamic Range, and Stability of Calibration", <u>Diabetes Care, Vol. 23</u> , No. 2, (2000),208-214	
		WANG, T. L., et al., "Sick Sinus Syndrome as the Early Manifestation of Cardiac	\top
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Examiner Initials*	Cite No 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), the of the remainder (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s),	<u> </u>
0		"Homophromatosis", Journal of Electrocardiology, Vol. 27, No. 1, (1994),91-96	
		WINDECKER, S., et al., "Two-Year Experience with Rate-Modulated Facing Controlled by Mixed Venous Oxygen Saturation", Pace Vol. 21, (1998),1396-	
		WONG, K. K., "Vascular Effects of Low and High Doses of Clonidine in Rats", Artery 20(4), (1993),180-188	

EXAMINER Suf US DATE CONSIDERED (1/23/37